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DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

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Division Director

August 25, 2016

Robert Hicken
Mountain Valley Stone, Inc.
2276 South Daniels Road
Heber City, Utah 84032

Subject: Fourth Review of Notice of Intention to Commence Large Mining Operations, Mountain Valley Stone, Inc., Brown's Canyon Quarry, M/043/0019, Summit County, Utah

Dear Mr. Hicken:

The Division of Oil, Gas and Mining has reviewed the referenced amended Notice of Intention to Commence Large Mining Operations (NOI) which was received July 11, 2016. The attached comments need to be addressed before tentative approval may be granted.

Please submit your response to this review by September 12, 2016, as two clean copies. The Division will not approve further increases to the disturbed area until this NOI is approved.

The Division will suspend further review until your response to this letter is received. Please contact Leslie Heppler at 801-538-5257 or me at 801-538-5261 if you have questions regarding the review. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: lah: eb

Attachment: Review

cc: LGarahana@blm.gov
Army Corps of Engineers
Leah Ann Lamb, Division of Water Quality

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FOURTH REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

**Mountain Valley Stone
Browns Canyon Quarry**

**M/043/0019
August 25, 2016**

General Comments:

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
1	Page 7 Para 1	After “the first sentence, please add the following sentence – “The Operator understands that there are inconsistencies between the text and figures in the NOI. Any inconsistencies in the plan will be enforced at the discretion of the Division of Oil, Gas and Mining.” At any time the Operator can choose to remediate the inconsistencies in the NOI.	lah	
2	General	The Division may have additional comments based on the responses to this review.	lah	
3	General	<p><i>Previous comment - The text discusses areas by lot numbers, but the maps refer to phase numbers. Please be consistent and use the phase numbers throughout the text and all maps.</i></p> <p>New comment – Still a few remaining – Please be consistent and refer to phase numbers – see the following:</p> <ul style="list-style-type: none"> • page 7 – 1) simply remove the parcel numbers, (permit numbers work well, just remove brackets) 2) refer to phase numbers • photo(s) 	lah	
4	Omission	Nothing is written about Concurrent reclamation, including the BLM area.	lah	
5	Appendix I	<p><i>Previous comment - Appendix I: The recommendations in the geotech report are a snapshot in time and need to be consistent with the text. Figure 7 has been modified and needs to be corrected.</i></p> <p><i>Previous comment – Section 109.4 of the text needs to refer to the geotechnical report. The text should note that the report was for slope conditions in June 2015. In addition, the text should note when any of the geotechnical properties of the rock or the phreatic surface changes, the stability will be reviewed and the operator will maintain an adequate factor of safety.</i></p> <p>New comment – Please add “or phreatic surface changes” as the stability is most likely directed by the pore pressures in the area. In addition change geotechnical to “geomechanical.”</p>	lah	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
6	Page 9	<i>Previous Comment - BLM had mineral rights on a portion of the land shown on Figure 2; this is inconsistent with page 9. Please provide a separate map showing mineral rights ownership (versus the surface rights).</i>	lah	
		<i>Previous comment – Please see the September 23, 2002, BLM submittal to OGM for M/043/0012 on the Division web page, www.ogm.utah.gov.</i>	lah	
		<i>New comment - Please provide a separate map showing mineral rights ownership (versus the surface rights).</i>	lah	

R647-4-105 - Maps, Drawings & Photographs

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	Figure 4a	<i>Previous comment - Include acreages of Phases 1, 2a, 2b, and 3.</i>	lah	
		<i>New comment - Phase 1 is incorrect. All disturbance needs to be included in the acreage figure – it would include everything without vegetation.</i>	lah	
		<i>The bond summary sheet notes 63 acres. The disturbance needs to match the bond. The “Total projected disturbed acres” should match the surety bond summary sheet.</i>	lah	
8	Figure 7b	<i>Previous comment - Please correct location of the orange line to match the disturbance on the base map air photo.</i>	lah	
		<i>New comment – It appears the orange line is under the yellow line, but as noted above all disturbance needs to be included in the acreage figure – it would include everything without vegetation.</i>		
9		<i>Previous Comment - The reported maximum mining depth of 6,420’ is not consistent with the maximum depth elevations of the North Pit and South Pit excavations shown on Figure 6a and Figure 6b.</i>	aa	
		<i>New Comment: The revised text and figure show the maximum mine depth in the text reported as 6,250 but the cross section D-D on Figure 6a is still shown at the old elevation of 6,420.</i>		
10		<i>New Comment: Figure 5 and Figures 6a and 6b cross sections need to be labeled in standard convention: D-D’, E-E’. Without this demarcation, it is unclear to the reviewer if the cross section maps are north to south or south to north. Please make the corrections.</i>	aa	

R647-4-106 - Operation Plan

106.1

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
11	Page 13 Para 1	<i>Previous Comment - Text notes Figure 3 is a USGS topographic map, but Figure 3 is an air photo base with topographic contour lines.</i>	lah	
		New comment - Text notes Figure 3 is a topographic map. Change the text to "Figure 3 is an air photo base with topographic contour lines." In addition, please delete the word "symbols."	lah	

106.3 - Estimated acreages disturbed, reclaimed, annually

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
12	Page 16	<i>Previous Comment - As noted above, Tables 1 and 2 should refer to the mine phases versus the lot numbers. In addition on Table 1, please include explain the difference between the 61 acres total and the 37 acre total.</i>	lah	
	Page 14	<i>Previous Comment - Table 1 is labeled as "...and over the life of the mine" but the table only shows the current disturbance. Please change the title of Table 1. Please include a table with the reclaimed acres or state in the text that no reclamation has begun and estimate the year it is anticipated to begin.</i>	lah	
		<i>Previous Comment - Please include a table or verbiage in the text regarding the estimated annual reclaimed area. The totals for all should add up and be consistent.</i>	lah	
		New comment - Table 1 has 61 acres and the Surety Calculations have 63 acres. Both need to be consistent and match the figures. Tables 1 & 2 do not adequately summarize the disturbance and what the operator plans to do. The phrase "existing disturbance" should be all areas without vegetation (this means all, not just the areas shown on an old airphoto). Future disturbance is areas in which the operator is seeking approval, but has not yet bonded. The area that is partially backfilled has not reached reclamation status, as it is not topsoiled and seeded. The Division suggests that the tables be reworked. The Division would be happy to assist. In addition the text in section 106.3 needs to be consistent. If the 104 acres is the bright yellow line, add 104 acres to the legend.	lah	
13		Phase 3 is shown on the Figures but only mentioned in Table 2 for topsoil. If you have a topsoil stockpile you have a disturbance somewhere else. For the revision it needs to be perfectly clear what area is to be bonded and disturbed. The disturbed area should at a minimum include what the operator intends to disturb over the next 5 years. What is the plan for phase 3?	lah	
14		Page 18 is blank - please remove the page and re-number or add a statement that it is intentionally left blank.	lah	

106.10 - Amounts of material moved (including ore, waste, topsoil, etc.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
15	Page 20	<p><i>Previous comment - Please include a chart or table with the amount of material to be moved. Include the volume of topsoil, the volume of decorative stone, engineered material stockpile, and the waste used for backfill. As written the statement notes the deposit continues at depth but doesn't clearly define the operator's intent.</i></p> <p><i>Previous comment - Under section 106.10 include a statement of the estimated amounts of material to be moved. Also include a statement comparing the depth of water to the depth of mining.</i></p> <p><i>New comment - Please include a chart or table with the amount of material to be moved. The new text is related to the location, but does not address production rates, i.e. amounts.</i></p>	<p>lah</p> <p>lah</p> <p>lah</p>	

R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
16		<p><i>Previous Comment - Please include costs for plugging the well in the reclamation cost estimate. A determination will be made at the time of reclamation whether the well needs to be plugged and abandoned.</i></p> <p><i>Previous comment - Thank you for including the cost to pull the pumps. In addition, include the costs of plugging of the hole (need 3 independent bids). If in the future the well is transferred to Wright/Garff the bond will be returned to the mine operator.</i></p> <p><i>New comment - Thank you for including one independent bid, but the one bid included was only valid for 10 days; the bid is already out of date.</i></p>	<p>lah & pbb</p> <p>lah</p> <p>lah</p>	

R647-4-109 - Impact Assessment

109.1 - Impacts to surface & groundwater systems

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
17	Figure 4a	<i>Previous Comment - The proposed "Access Road" shown on this figure will impact a jurisdictional wetland and require a Section 404 Joint Permit filed with the Army Corps of Engineers and Utah State Engineers Office if fill will be used to construct the crossing. This can be avoided if the crossing can be spanned with a bridge that requires no fill. Please describe the proposed method to be used for the crossing.</i>	mpb	
		<i>Previous comment 2 - The Corps documentation is good. Potential impacts to any wetlands can be costly to delineate, permit, and mitigate. As an alternative, the Division has suggested a bridge span, with the idea of possibly using recycled flatbed railcars laid side-by-side to avoid wetland impacts altogether. They are relatively inexpensive and can likely be resold after their use for this operation. This is just a suggested alternative for internal cost analysis consideration. Thank you for your response.</i>	mpb	
	Appx H	New comment - If a culvert crossing is used in the identified jurisdictional wetland to access Phase 3 (and thereby requires stream alteration and Corps permits), reclamation costs may need to be included to pull the culvert and restore the stream bed to its natural channel dimensions. This should also be addressed for the two existing culvert locations. Restoring stream channels is typically a bit more complicated than simple regrading.	mpb	
18	Section 109.1	<i>Previous Comment - Potential impacts to wetlands and natural drainage channels in and around the permit area were not analyzed in this section either. If potential impacts exist, a mitigation plan must be proposed. Information was presented in Section 107.2 & 3 regarding erosion control measures, but the mitigation information needs to be addressed under impacts. The operator states that they will follow the recommendations from the consultant and the Corps of Engineers, but those recommendations were not listed in the plan.</i>	aa	
		<i>Previous Comment - Mining on Lots 26 and 27 (Phases 2a, 2b and 3) is proposed to a depth of 6420, which is below the elevation of Lost Creek. This indicates that impacts to Lost Creek are possible. MVS proposes a 50-foot set back buffer from the stream, and the operations will be modified if groundwater seepage is encountered. The Division can approve this item provided that the 50-foot buffer is demarcated either with flagging or an adequate berm and that records be kept quarterly indicating groundwater seepage and provided to the Division upon site inspection.</i>	aa	
		New Comment: The NOI needs to contain a commitment that the 25-foot setback will be demarcated with flagging or signage to alert mine personnel to the 25-foot set back zone established by the Corps of Engineers in order to avoid an accidental encroachment of mining activities into the prohibited wetland area.	aa	

110.5 - Revegetation planting program

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
19	Page 39	<p><i>Previous comment - Yarrow, sagebrush, and forage kochia seed should be broadcast. This may be accomplished by putting these species in the smallest seed box, and then pulling the drop-tubes from this seed box to the disk openers - thus broadcasting these seeds while the rest of the mix is drilled.</i></p> <p>New comment - Regarding the use of fertilizers and soil amendments, the Division agrees that fertilizing (especially at agronomic rates) generally does more for weed establishment than benefitting the revegetation efforts. However, as per the soil analysis, nitrate nitrogen (the form plants can use) is very low. It is recommended that 25-40 lbs of a nitrogen fertilizer be applied (native rangeland soils should have close to 25 ppm N at a minimum).</p>	lk lk	

R647-4-113 - Surety

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
20	Tank Removal	New - Smaller tanks were combined into one tank of 5370 gallons for disposal but the cost of \$830 was not carried over to the far right column.	whw	
21		New - Means number should be 02 65 10.30 0110 instead of 02 65 10 0110.	whw	
22		New - Could not locate Means number 02 65 10.30 603. Last digits of Mean are usually 4 digits instead of 3.	whw	
23	110.2 Highwalls	<p>Please state how highwalls will be brought into compliance and include the costs in the reclamation cost estimate. The reclamation plan says highwalls will be worked to maintain up to a 45-degree slope and stair-stepped, or the recommendations in the geotechnical report will be applied. There is nothing in the reclamation cost estimate that directly relates to highwalls.</p> <p>Add "all mined highwall slopes will be backfilled and reduced to no steeper than 2H:1V at the time of final reclamation except where variances have been accepted by OGM for Area 5."</p>	whw lah	
24	Earthwork Spread Stockpile	<p><i>Previous comment - The unit cost for spreading the soil stockpile is in 31 23 23 14 5000, and this is for a 300 horsepower bulldozer to push sand and gravel 50 feet. This assumes that stockpiles are an average of 50 feet from the area where the material will be deposited. Please show where the soil stockpiles are located, or increase the haul distance. If the haul distances are long then the material could be transported using trucks or excavators.</i></p> <p>New comment - Information not provided in bond costs. Location of soil stockpile should be shown on maps to confirm that the push distance is 50 feet.</p>	whw whw	